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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/673,961 | 09/29/2003 | Martin Dust | MOH-P010032 | 3944 |
| 24131 | 7590 | 03/30/2004 | EXAMINER | |
| LERNER AND GREENBERG, PA P O BOX 2480 HOLLYWOOD, FL 33022-2480 | | | CHAPMAN JR, JOHN E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2856 | |

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,961

Applicant(s)

DUST, MARTIN

Examiner

John E Chapman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/29/03 & 11/10/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 7-12, 16-18 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Harth, III et al.

Harth teaches measuring the thickness of a layer 18 in a vessel 14 using an ultrasonic transducer 40 in contact with an outside diameter surface of the vessel, wherein the vessel may comprise the jacket for fuel rods (col. 4, lines 2-3). The probe 40 may comprise a Panametrics V-214BA ultrasonic transducer (col. 8, lines 42-43), which transducer has a planar surface region. See page 20 of the Panametrics, Inc. transducer catalog.

Regarding claims 2-3, 11-12 and 17-18, the coupling surface would inherently be substantially planar, since the transducer is applied to the vessel in the same manner as disclosed by the applicant.

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Regarding claims 7, 10 and 22, Harth teaches operating at a frequency of 100 MHz (col. 4, lines 3-5), which frequency is required for cladding layers whose thickness lies between .08 and 0.1 mm (col. 3, line 66 to col. 4, line 6), which thickness is "approximately 0.15 mm."

4. Claims 1-3 and 6-12, 15-18 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harth, III et al. in view of Krautkramer et al.

Harth teaches measuring the thickness of a layer 18 in a vessel 14 using an ultrasonic transducer 40 in contact with an outside diameter surface of the vessel, and teaches that it is known in the art to measuring the thickness of the cladding layer of fuel rods (col. 4, lines 2-3). Accordingly, it would have been obvious in view of the disclosed background to use the apparatus of Harth to measure the thickness of the cladding layer of a fuel rod. The probe 40 appears to have a planar surface region (page 20 of the Panametrics, Inc. transducer catalog), and if not, it would have been obvious in view of Krautkramer to use a probe having a planar surface region. Krautkramer teaches that it is well known in the art to use a flat probe on a cylindrical surface (pages 290-293).

Regarding claims 2-3, 11-12 and 17-18, Krautkramer teaches that the contact face has the shape of a narrow rectangle (pages 290-291).

Regarding claims 6, 15 and 21, Harth teaches operating at a frequency up to 100 MHz (col. 4, lines 3-5), which frequency is required for cladding layers whose thickness lies between .08 and 0.1 mm (col. 3, line 66 to col. 4, line 6). Accordingly, it would have been obvious to measure thickness of tubes having a cladding layer down to .08 and 0.1 mm. In particular, it

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would have been obvious to measure thickness of tubes having a wall thickness less than 1 mm and a cladding layer between .08 and 0.1 mm.

Regarding claims 7, 10 and 22, it would have been obvious to measure thickness of a cladding layer greater than .08 to 0.1 mm, such as 0.15 mm.

5. Claims 4-5, 13-14 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harth, III, in view of Trulson et al.

The only difference between the claimed invention and the prior art consists in digitally processing the echo signal. Trulson teaches that it is well known in the art to digitally process an echo signal to reduce the chance of error and obtain more consistently accurate measurements (col. 1, lines 53-57). Accordingly, it would have been obvious to digitally process the echo signals in Harth in order to reduce the chance of error and obtain more consistently accurate measurements.

6. Claims 4-5, 13-14 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harth, III in view of Krautkramer as applied to claims 1, 8 and 16 above, and further in view of Trulson et al.

The added difference between the claimed invention and the prior art consists in digitally processing the echo signal. Trulson teaches that it is well known in the art to digitally process an echo signal to reduce the chance of error and obtain more consistently accurate measurements (col. 1, lines 53-57). Accordingly, it would have been obvious to digitally process the echo

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signals in Harth in order to reduce the chance of error and obtain more consistently accurate measurements.


7. Applicant is advised that should claim 2 be found allowable, claim 3 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. Likewise, should claims 4, 11, 13, 17 and 19 be found allowable, claims 5, 12, 14 18 and 20 will respectively be objected to as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rottmar discloses an apparatus for fixing an ultrasonic transducer having a planar surface to a container having a curved outer surface.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John E Chapman
Primary Examiner
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